DSCC ACTIVITIES

PSMC/PMR IPT

10 May 2007

Chief, Standardization Unit

TOPICS

- Operations Support Group (DSCC-V)
- Engineering and Standardization Highlights
  - Document Standardization (DSCC-VA)
  - Sourcing and Qualification (DSCC-VQ)
  - Standardization Unit (DSCC-VS)
- ICP and Technical Operations
  - Value Management (DSCC-VE)
  - Product Verification (DSCC-VP)
  - Technical Data (DSCC-VT)
- Challenges and Issues
- Summary

V Mission and Vision

- Mission:

  To support our customers with responsive engineering, technical, and logistics services at the best value

- Vision:

  To be the premier provider of support and services to our customers by continually improving our processes and utilizing state of the art technologies

Operations Support Group

Operations Support Gro — VI Operations

- **Engineering/Standardization**
  - VA Documentation
  - VQ Qualification
  - VS Standardizatio
- **ICP - Technical Operations**
  - VE Value Manageme
  - VP Product Verification Prog
  - VS Standardization / Packagi
  - VT Technical Data Manager

Engineering and Standardization

- The goal is to make available the right item (function, quality, and reliability) as efficiently as possible
  - This is accomplished by documenting and qualifying various parts
  - These parts are then introduced in designs and used to consolidate demand at the NSN level

Document Standardization (DSCC-VA)

- Requirement: Support DoD customers with standard parts and standardization documents (“Right Item”)
- > 11,000 standardization documents
  - MIL SPECS/Standards, Standard Microcircuit Drawings, Commercial Item Descriptions, Nongovernment Standards, Vendor Item Drawings
- > 56,000 Requisitions/month
- >$10.7 Million in Sales/month

DSCC-VA Initiatives

Vendor Item Drawings (VIDs)

- Single standardization document
- Controlled baseline
- Enhanced product change notification of processes, materials, electrical performance, finish, molding compounds and manufacturing locations
- Extended temperature performance
- Enhanced pedigree – reliability and electro migration checks, electrical characterization over temperature and confirmation of package performance over temperature
- Enhanced obsolescence management

DSCC-VA Initiatives – cont.

VID Status

- Currently 337 VIDs dated
- 607 Unique device types
- 711 Part types
- 8 VID Drawings in process
- 3 Manufacturers:
  - TI
  - National
  - Intersil

DSCC-VA Initiatives – cont.

MIL-PRF-38534 Hybrid Microcircuits

- Developing Revision F
- Primary Emphasis on Space Level Requirements
- Amendments will be used in the interim to address immediate issues as they arise

DSCC-VA Initiatives – cont.

Cadmium Plating Alternatives

- Alternate Finishes Approved By SAE-AE8C1
  - Zinc Nickel
  - Teflon Nickel
  - Pure Electrodeposited Aluminum
  - Zinc Cobalt
- Affects a large number of connector specifications
- Alternatives will be available soon but Cadmium will continue to be an option

HANDOUT

- VA ORG CHART

Sourcing & Qualifications (DSCC-VQ)

- Evaluate and approve manufacturers and products to ensure the right item (function, quality and reliability)
  - Perform audits of facilities – 300+ per year
  - New Product Qualification actions – 1500+ per year
- Provide a listing of manufacturers with their capabilities and parts
  - Publish 260 Revised/New QPLs/QMLs per year

DSCC-VQ Initiatives

- Incorporation of QPLs and QMLs into ASSIST automated system
  - Initial efforts done by end of May
  - Completion by end of CY 07
  - Additional DSCC Link
- Cooperative effort with JEDEC and G-12 Committees to find and minimize counterfeiting

HANDOUT

- VQ ORG CHART

Standardization Unit (DSCC-VS)

- Lead Standardization Activity
- Item Reduction
- Parts Management
- Diminishing Manufacturing Sources and Material Shortages (DMSMS)
- Hazardous Materials Minimization (HMMIN)
- Packaging
- Research and Development

Lead Standardization Activity (LSA)

- Ensures standardization activities are beneficial and within policy
  - Eliminates duplication of effort
  - Approves projects
  - Resolve disputes
  - Reviews documents within LSA purview
  - LSA for 20 plus Preparing Activities
  - LSA for 13,000 documents and 65 FSCs

Item Reduction

- Eliminate duplicate and unneeded NSNs from the logistics system based on providing the optimum part
  - Consolidates demand
  - Eliminates the effort necessary to support unnecessary NSNs
  - Cost avoidance FY06 $2.3M (Department of Operations Research and Resources Analysis Studies – Sep 99)

Parts Management

- Work with Program Offices and their designers to ensure the optimum part (quality, reliability, availability, cost) is chosen during design
  - Reduces logistics issues in the future
  - Re-engineering

	2005	2006
Reviewed	1467	157
Replacements	138	10

DMSMS

- Definition: “Loss or impending loss of manufacturers of items or suppliers of items or raw materials…..”
- Results in DSCC being unable to provide spare parts to the warfighter (i.e., do our mission)
- “Obsolescence” and “DMSMS” sometimes used interchangeably.
- DoD Components shall proactively take actions to identify and minimize the DMSMS impact on weapon system’s logistics support efforts.
- Especially problematic in microcircuits but can affect any material / item that DLA manages.

DMSMS Team Mission

- DMSMS Office is the DLA authority for DMSMS issues.
- Central authority for processing cases.
- Evaluate manufacturers discontinuance notices
- Establish and process cases via Shared Data Warehouse (SDW).
- Help develop sources or alternate means of support.
- Obtain user requirements and procures parts.
- Develop, utilize, update Shared Data Warehouse.
- Manage development and implementation of DoD DMSMS Knowledge Sharing Portal (DKSP).
- Manage the GEM and AME programs.

Shared Data Warehouse

- Primary tool for managing DMSMS cases.
- Single point of entry to multiple databases.
- Enables receipt of DMSMS notification data electronically.
- Enables reactive and proactive case processing.
- Provides tools for exchanging data, identification, and customer inventory requirements for items affected by obsolescence.
- Provides Case History File.
- Provides centralized repository for resolution data and promotes information sharing across and within Services.

DMSMS Knowledge Sharing Portal (DKSP)

- Mission Statement: “The DMSMS Knowledge Sharing Portal is aimed at providing value-added assistance to DoD programs to implement and continually improve proactive DMSMS strategies”.
- Develop DMSMS into a focused and pro-active centralized program to support the Warfighter.
- Provide a centralized resource to Program Offices large or small sharing DMSMS solution visibility and information.
- Capture DMSMS metrics.
- Expand capability to include component and raw material areas across many commodity groups.
- Identify and recommend policy changes that can benefit the DMSMS community.
- Enable partnering for total worldwide DMSMS support.

GEM

- Challenge: DMSMS is especially problematic in 5962
  - Consumer electronics focus
  - Expensive solutions (component & system)
- Mission: provide form fit and function replacements for non-procurable ICs
- Focus: 1970s, 1980s digital logic and memories (RTL, DTL, TTL, CMOS)

GEM

- Approach: Use existing industry manufacturing capability and Gov’t funded design system. Reverse engineer (by characterizing the performance of the obsolete part) and reimplement in current, stable technology
- Output: Fully compliant, QML ICs, which meet all spec requirements (performance and QA).

GEM

- Impact
  - 353 Unique Weapon Systems supported
  - >90,000 units produced
  - >2,200 Insertions completed proving out the technology and concept
  - 441 NSNs have an extended manufacturing source
  - 806 p/ns listed on the SMCR/QML
  - >$100M in Cost Avoidance

Glossary of Terms

- Bridge Buy – Purchase of sufficient quantity to continue program support while implementing a new solution.
- Life of Type Buy – Purchase a supply of DMSMS items to support total demands for the life of impacted systems or equipment.
- Aftermarket Supplier – A source that may provide finished goods, continued manufacturing of the original manufacturers product, mil wafer storage, and commercial wafer.
- Alternate Part – A form, fit, function replacement that requires documentation to be updated.
- Emulation – The process of developing form, fit, function replacements for obsolete microcircuits using state of the art material design and processing techniques.
- Redesign – This solution is chosen when it is more economical to redesign than to identify solutions for a large number of DMSMS products that exist on a circuit card.

Glossary of Terms

- Continuing Source – Group of programs together defining a requirement that changes the manufacturer's decision to obsolete a given product from production.
- Develop a New Source - Develop a new source for the same product.
- Substitute Part – Requires minor redesign to accommodate the part and change appropriate documentation.

Hazardous Materials Minimization

- Eliminates or reduces hazardous materials requirements from standardization documents prepared by DSCC and the military services.
- Helps reduce the amount of pollutants released into the ecology system.
- Reduces total life cycle cost and identifies non-hazardous or less-hazardous substitutes through research and use of environmentally preferable materials.
- Coordinates the requirements for obtaining Material Safety Data Sheets (MSDSs) on items that contain hazardous/toxic materials from item manufacturers; reviews for accuracy of MSDSs and forward them to the Hazardous Material Information Resources System (HMIRS)
- Conduct HMMIN Team meetings to resolve hazardous material issues as they apply to DSCC.
- Act as the technical expert for internal DSCC and external customers (Military, DLA, Federal Agencies and industry) on hazardous materials related issues.

Packaging Team

- Establishes and verifies packaging requirements and provides technical support to Acquisition
- The goal is to protect the items as efficiently as possible so that they are usable after shipment

Packaging Office Main duties:

- Development of Packaging requirements for all DSCC managed parts
- SSR (supply support requests)
- RSW’S (Release Strategy Workflows) via BSM
- Provide the acquisition community support on Long Term Contracts and Purchase requests
- QN (Quality Notifications) via BSM, or other programs on non-conformance issues
- Unit of Issue office for the Center

Two types of Packaging/Preservation:

- MIL-STD-2073(1)(D) or latest
- For most stock shipments or overseas shipments (FMS, other)
- Generated on most buys as shown on item trailer sheet under CLIN line item and quantity
- ASTM-D3951 (Standard Commercial)
- Typically for DVD (Direct Vendor Delivery) or in ESOC requests when authorized by VSP office
- In most cases the QUP will remain 001 unless otherwise stated

MIL-STD-129(P)(3) Marking for Military Items

- Mandatory on all locations regardless of final destination, all box, bag & container, pallet markings

- Includes marking requirements for RFID (Radio Frequency Identification Devices)

- Necessary for proper identification and distribution of Military Supplies in the acquisition life cycle

- Does not include the bare item markings – MIL-STD-130 (is the quality office area) and involves the individual stampings on the part itself

Long Term Contracts & Purchase Requests received from buyers:

- A large majority of the workload in the packaging office comes from the acquisition community via requests for reviews on multiple NSN's, 500+ on many contracts

- This workload assignment along with RSW's processed are tracked by the command office and affect the metrics and turn around times on the buyers award lead time

Contractor Quality Performance Evaluation Program – CQPE

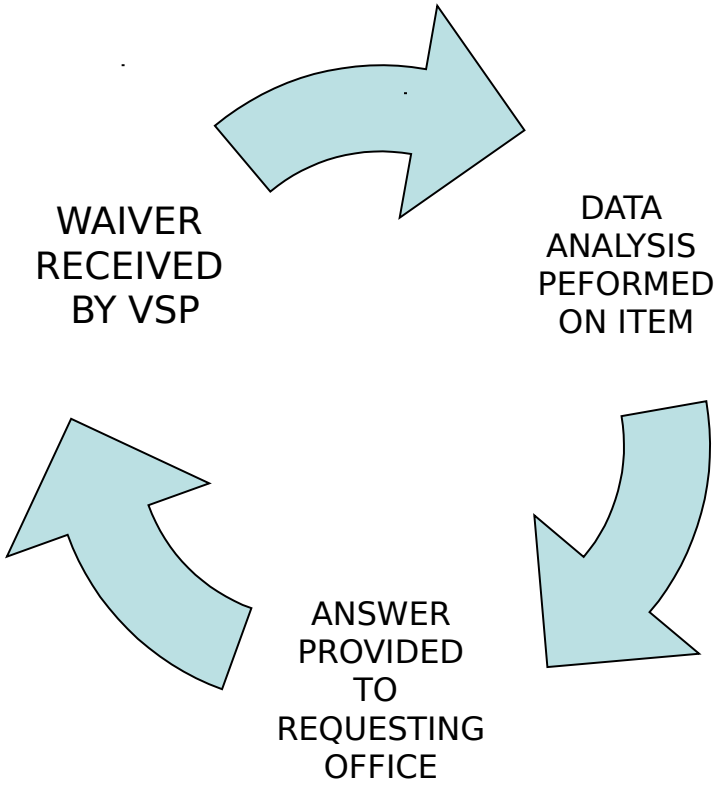
- Quality notifications processed in the Packaging Office which are directly resulting from Contractor non-conformance/non-compliance issues

- Tracked via a database that involves any marking discrepancies or packaging/preservation discrepancies that involve stock held up in litigation by depot screening activity or customer returns

Unit of Issue Changes/Requests for Deviations or Waivers from others

- Unit of Issue changes originate from how the item is issued from the OEM, sole source of supply situations or upon review from the VSP office or other

- They involve a 30-75 day process with coordination with pricing offices, cataloging and planning



Value Management Programs

- Sustainment Engineering
- Price Challenge/Should Cost
- Castings and Forgings
- Replenishment Parts Purchase or Borrow Program (RPPOB)
- Spare Parts Breakout
- Organic Manufacturing
- Value Engineering Change Proposals (VECPs)
- Reverse Engineering

Value Management

Goal: Provide DLA customers with the best material at the lowest cost

- Provide Support to Technical and Buying Community
  - Maritime and Land Supply Chain
- Saved $53M in FY06, $344M over past 6 years

	FY01	FY02	FY03	FY04	FY05	FY06
Goal	$40M	$40M	$43M	$47M	$54M	$61M
Actual	$40.8	$55M	$59.4 M	$80.6 M	$55.4 M	$53.0 M

Sustaining Engineering

- Improve/upgrade DLA-managed items
  - New technology
  - Quality/reliability improvements
  - Ease of maintenance improvements
  - Improve logistics footprint
- Save money!!
- DLA initiates SE Program
  - Aviation items
    - DSCR: Jan 03
  - Land and Maritime items
    - DSCC: Jan 04

DSCC Sustaining Engineering

- Proposals solicited from all services
- Proposals evaluated by DSCC team
  - Value Management Team lead
  - Weapon System Support Manager (WSSM)
  - Cognizant Maritime/Land Application Team
    - Engineer/technical
    - Product Assurance
    - Buyer
- Selections funded/implemented in order of
  - Date of receipt
  - Weapon system support impact
  - Overall best value to customer
- Accepted proposals funded by DSCC
  - Coordinated with ESA
  - Funds available FY07: $5M

Project Selection Criteria

- DLA/DSCC managed item
- Minimum ROI of 10:1
  - Lifecycle savings
- Make positive impact
  - Operational readiness
  - ALT/PLT
  - Item demand
  - Unit price
- Reduce field maintenance actions
- Improve competitive position
  - Availability of tech data
  - Increase sources of supply

Naval Transmitter Buoy

NSN 5820-01-500-7012

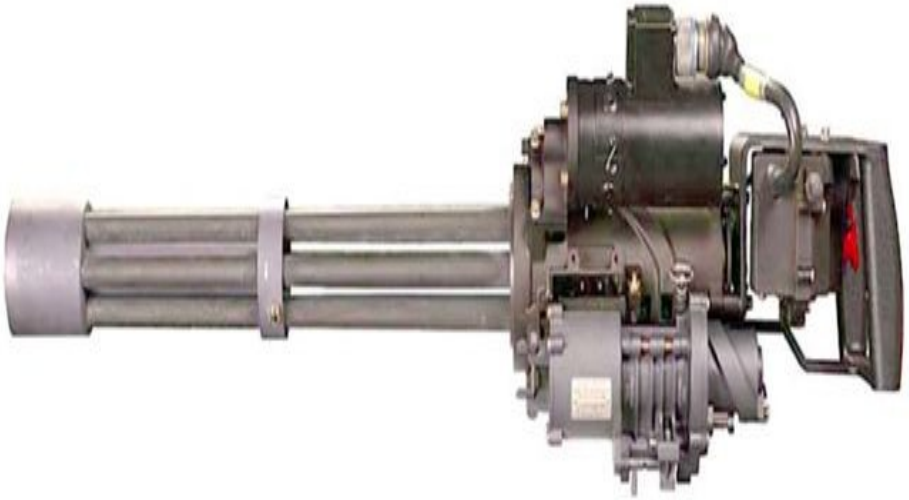
- Upgrade Transmitter Buoy to a single buoy to replace the current four-buoy system used by all US Navy submarines
- Benefits include:
  - Four NSNs cancelled
  - Four Allowance Parts Lists (APL's) replaced with one
  - Shipboard storage space reduced
  - 50% reduction in acquisition cost
  - CONUS source

Investment: $409K
ROI: 24:1
Project Savings: $10M

M-134 Mini-Gun Wear Gage

NSN 1005-00-903-0933

- Rock Island Arsenal (RIA) developing barrel wear gage for M-134 Mini-gun
- Barrels currently replaced every 100,000 rounds fired
- Barrel wear gage will assess remaining barrel life
- RIA estimates a lifespan of over 200,000 rounds a barrel
- Extending barrel life will reduce support and operating cost



Investment: $115K
ROI: 31:1
Project Savings: $4.5M

Price Challenge and Should Cost Programs

Price Challenge Program

- Established to Reduce
  - Fraud
  - Waste
  - Inefficiencies in the Acquisition of Spares
- Customers are
  - DoD Civilians
  - Military personnel
  - Civilian Contractors
- Investigates Complaints/Concerns on Overpricing
  - Improves Customer Satisfaction

Price Challenge Program

- Who Uses the Program?
  - Military Customer
  - DLA Personnel (mostly Buyers)
  - DoD Contractors
- What We Do
  - Validate the Concern
    - If Valid: Initiate Corrective Action
  - Answer Customer
  - Track Corrective Actions
    - Assure Completion

Should Cost Analysis

- Engineering cost estimate
  - Material and Labor
  - Testing
  - Packaging
  - Manufacturing Charges
  - Overhead and Profit
- Buyers Use the Program
  - Support a quote
  - Help in pricing negotiations
- VE completes Should Cost
  - Supports Buyer during Price Negotiations
- If unable to complete Should Cost
  - Will attempt other solutions to reduce costs

Price Challenge Example

- NSN 4320-01-439-0131
- VE received a price challenge from a military customer about the high price of subject seal assembly
- In February 2004, DSCC had purchased 5 each from Textron Marine and Land Systems at $8,223.00 per unit.
- Research revealed that Ultrafab Corporation, and not Textron, was the manufacturer
  - Ultrafab added as an approved source.
- In 2005, DSCC requisitioned 180 each
  - Ultrafab Corporation quoted $2,349.79 per unit.

Initial Contract Savings: $1,057M

Cost of Assembly: Decreased 71%

Castings and Forgings Program

Castings & Forgings

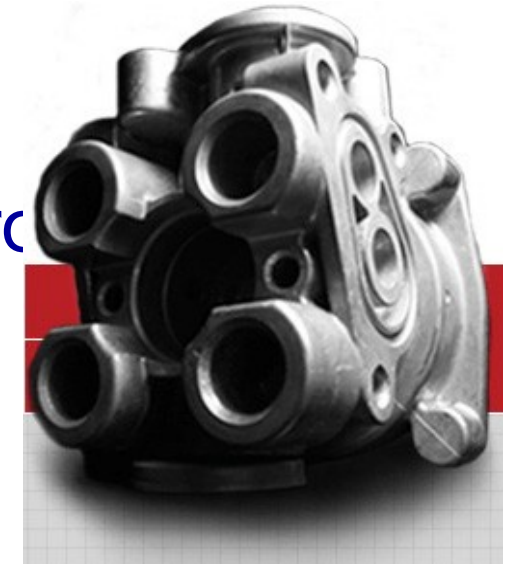
- Castings are complex metal shapes
  - Structural, mechanical, engineered application
  - Formed from liquid metal, produced in a mold
  - Often are “hidden” components of an assembly
- Forgings can be complex or simple shape
  - Forging is heated metal, but not molten
  - Formed by pounding or pressing it into the desired shape
  - Sometimes tooling is required,
  - Sometimes are “hidden” components of an assembly

DLA’s Goal

Procure high-quality, cost-effective cast or forged parts for weapon systems to meet readiness requirements

Procurement Issues

- Long lead times
- Defaulted contracts
- Identifying cast or forged parts/components at the assembly level
- Tooling availability
- Diminishing manufacturing sourc
- Low quantity procurements
- Contracting to correct sources



A Common Plan

- HQ DLA has implemented two programs
  - Shared cost between Government and Industry
  - Address key technical needs
- Castings for Improved Readiness (CIR)
  - Supported by American Metalcasting Consortium (AMC)
  - Managed by Advanced Technology Institute (ATI)
- PRO-FAST
  - Supported by Forging Defense Manufacturing Consortium (FDMC)
  - Managed by ATI
- Programs focus on three areas
  - Resolve casting/forging part problems
  - Training for Government personnel
  - Research & Development

Strategic Direction

- Ensure a viable casting or forging supply chain future
- Apply new technologies
- Reduce administrative and production lead times
- Utilize extensive casting and forging experience and knowledge to solve supply chain backorders
- Incorporate AMC/FDMC information into DLA's procurement processes to improve readiness

Remember, When Using AMC or FDMC they…

- Do not change your contractual responsibility
- Are not part of your contract
- Won't charge you, or won't pay you
- Are available to consult and assist
- Are an industrial organization, not government
- Cannot approve any tech data changes
- Cannot change anything in the terms and conditions of the contract

DSCC's X-IT Team

- Provides casting & forging assistance
- X-IT is comprised of Government and Industry representation
- X-IT is a resource available to the following:
  - DSCC Personnel: Product Specialists, Buyers, Planners
  - Engineering Support Activities (ESAs)
  - Contractors/Suppliers
    - With active DSCC contracts (w/Contracting Officers' approval)
    - Bidding on open DSCC solicitations

How X-IT Provides Assistance

- **Process and Material -** Understand the required casting or forging process and material (may be buried in a OEM specification and not be apparent)
  - **As-cast or forged tolerances**
  - **Surface finish requirements**
- **Sourcing** – Identify capable sources when unable to manufacture due to unresponsive supply chain
- **Tooling** – Find source for tooling when unable to manufacture due to unavailable tooling
- **Technical Field Support** to foundry/forge, process, design, manufacture, or other problems
- **Update TDP** with current specifications, processes, etc and their interpretation
- **Assist Engineering Support Activity** in expediting required engineering analysis/response

Yoke: Universal Joint

NSN 2520-00-679-9246

- Used on M113 Armored Personnel Carrier
- Supplier had no forging source
- FORGE-IT Team
  - Located forging source
  - Located tooling
- Enabled on-time delivery
- Lead time savings over 100 days
- Tooling cost avoidance of $25,000

Turbine Blowers

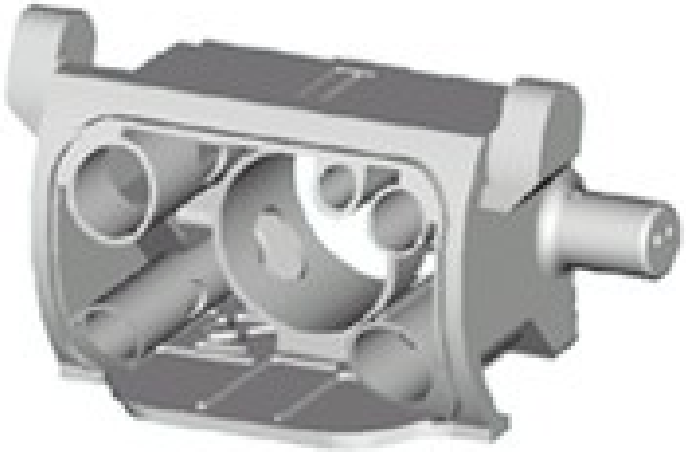
- Used on JFK Aircraft Carrier
  - Numerous NSNs involved
- Hardie-Tynes sole source supplier
  - Foundry source went out of business
- CAST-IT Team
  - Salvaged tooling for 78 parts
  - Identified new foundry source
- Supply chain was kept intact

Replenishment Parts Purchase or Borrow Program

RPPOB

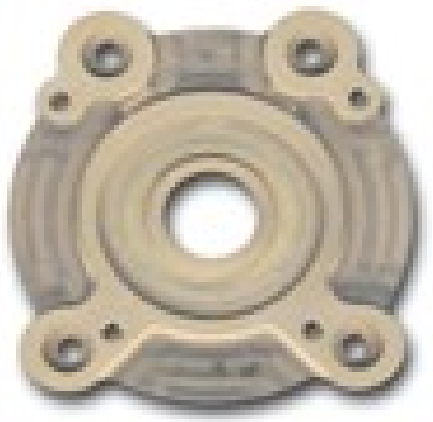
Why RPPOB?

- Statutory Requirement
  - Defense Procurement Reform Act of 1984
    - Public Law 98-525, Section 1216(a)
    - Codified at Title 10 U.S.C. 2320(B)
- Promote full and open competition
- Develop new sources
  - Sole Source
  - Limited Competition Items



RPPOB Methods

- Direct Purchase
  - Contractor purchases at Standard Unit Price (SUP)
  - Item is not returned
- Bailment
  - Item loaned at SUP
  - SUP held in Trust by DFAS
  - SUP monies returned
    - If item is returned in “A” condition



- View of Part
  - Contractors may inspect part in a designated area

RPPOB – What it is Not

- Not intended to proof their manufacturing
- Not available on solicitations/contracts when:
  - In accordance with a drawing
  - In accordance with a specifica
- Not to test a competitors part

Purpose: Develop New Sources

RPPOB Process

- Contractor request received
- Item reviewed as an RPPOB candidate
- Contact with ESA for approval to bail out
- Contractor provides monies and signs the agreement
- Item directly sent to Contractor
- Contractor provides alternate offer data package
- Data package sent to ESA for final approval
- System updated with approval

Benefits

- Break Sole Source
- Provide additional sources on limited source items
- Provide source for obsolete items
- Reduce cost through enhanced competition
- Potential for Unlimited Rights TDPs

Increased Competition = Lower Cost to

Product Verification

- Manage/track testing performed for the ICP
- Provide testing assistance to Supply Chains
- Integral component of the Acquisition process
- Develops test plans, selects/funds test labs, ships test samples, sends technical data to labs, reviews test results

Product Verification (continued)

- Technical arm of the Counterfeit Material & Unauthorized Product Substitution (CM/UPS) team

Technical Data

- Provide acquisition, authentication, Bidset processing, and storage & distribution of technical data assets
- Provide Administrative and Functional Support for JEDMICS and the Product Data Management Initiative
- Provide digitization and 100% quality assurance of procurement documents into the Electronic Contract File

Research and Development

- DSCC advocate for all R&D Programs
- Liaison between DLA HQ and DSCC
- R&D Team Developed for initiating new and leveraging existing R&D programs

Challenges and Issues

- Lead Free Solders (LFS)
- Specialty Metals
- Green Procurements
- Counterfeit Parts
- Parts Management Implementation
- Item Reduction
- Do More With Less

Summary

OUR FOCUS……

- Provide access to new technologies and initiatives
- Provide solutions on problem parts
- Reduce acquisition and support costs and timeliness

OVERALL GOAL: SUPPORT THE WARFIGHTER